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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,454	02/13/2004	Juergen Dickmann	3926.063	8976

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AKERMAN SENTERFITT
P.O. BOX 3188
WEST PALM BEACH, FL 33402-3188

EXAMINER

STRIMBU, GREGORY J

ART UNIT PAPER NUMBER

3634

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/779,454

Applicant(s)

DICKMANN ET AL.

Examiner

Gregory J. Strimbu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

The drawing correction filed August 16, 2006 has been approved.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

Claims 5-8, 11-15, 17 and 18, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Recitations such as “a vehicle door” on line 2 of claim 5, on line 2 of claim 6, and line 2 of claim 15 render the claims indefinite because it is unclear if the applicant is referring to the vehicle door set forth above or is attempting to set forth another vehicle door in addition to the one set forth above. Recitations such as “or” on lines 4-5 of claim 5 render the claims indefinite because it is unclear which one of the non-art recognized alternatives the applicant is positively setting forth. Recitations such as “are provided in an area of a pivot axis of the vehicle door” on lines 4-5 of claim 6 render the claims indefinite because it is unclear if the applicant is claiming the subcombination of the door space monitoring device or the combination of the door space monitoring device and the door. The preamble of claim 1 implies the subcombination while the positive recitation of the vehicle door implies the combination. Recitations such as “the photo-detector area” on lines 2-3 of claim 7 render the claims indefinite because they lack antecedent basis. It is suggested the applicant insert a comma following “housing” on line 2 of claim 8 to avoid confusion. Recitations such as “preferably” on line 4 of claim 8 render the claims indefinite because it is unclear whether or not the recitations following “preferably” are being positively recited. On line 3 of claim 11, it is suggested the applicant insert --planar-- following “mechanical” to avoid confusion. Recitations such as “a light beam” on line 4 of claim 11 render the claims indefinite because it is unclear

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if the applicant is referring to the light beam set forth above or is attempting to set forth another light beam in addition to the one set forth above. Recitations such as “an evaluation of relevance for potential detected obstacles” on line 4 of claim 17 render the claims indefinite because it is unclear what the applicant is attempting to set forth. What comprises a relevant obstacle?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication No. 10-26724. Japanese Patent Publication No. 10-26724 discloses a door space monitoring device for monitoring a door swing area of a vehicle door, comprising sensor means for sensing in the door swing area of the vehicle door, a sensor-data evaluating evaluation unit 14 and a control unit 11 for controlling the sensor means, wherein a monitoring area sensed by the sensor means is substantially two-dimensional, and wherein the sensor means includes at least one light source 15 for emission of a light beam (not numbered, but shown in figure 1, at least one micro mirror unit 16 for pivoting the light beam and at least one photo-detector 17 for monitoring the two-dimensional monitoring area.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 10-26724 as applied to claims 1 and 10 above, and further in view of Hornbeck. Japanese Patent Publication No. 10-26724 discloses, in figure 6a, the use of two DMDs.

Hornbeck discloses a DMD having non-planar mirrors 102, each of the non-planar mirrors "corresponds" to a contour of a vehicle door.

It would have been obvious to one of ordinary skill in the art to provide one of the DMD with mirrors, as taught by Hornbeck, to store energy in the mirror to avoid having the mirror "stick" to its substrate. See column 4, lines 40-64.

Claims 5, 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 10-26724, as applied to claims 1 and 10 above, and further in view of Mochida et al. Mochida et al. discloses a detection system provided in an external mirror K, the mirror is provided in the area of the pivot axis of the vehicle door as shown in figure 6.

It would have been obvious to one of ordinary skill in the art to use the monitoring device of Haas et al., as modified above, on a vehicle, as taught by Mochida et al., to

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provide a means for more reliably and accurately detecting an object adjacent a vehicle door.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 10-26724 as applied to claims 1 and 10 above, and further in view of Haas et al. Haas et al. disclose a housing 19 for enclosing the components of a door space monitoring device.

It would have been obvious to one of ordinary skill in the art to provide Japanese Patent Publication No. 10-26724 with a housing, as taught by Haas et al., to protect the components of the door space monitoring device.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 10-26724, as applied to claims 1 and 10 above, and further in view of Underwood. Underwood discloses a PIN diode photo detector 26.

It would have been obvious to one of ordinary skill in the art to provide Japanese Patent Publication No. 10-26724, as modified above, with a PIN diode, as taught by Underwood, to increase the sensitivity of the monitoring device.

Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 10-26724, as applied to claims 1 and 10 above, and further in view of Isogai et al. Isogai et al. discloses a space monitoring device comprising a pivotable mirror 15 which is controlled by a controller 70 to pivot at regular

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intervals (see paragraph 56, lines 1-5). Because the light source and the mirror are operated simultaneously, the light source is activated only during the pivot process.

It would have been obvious to one of ordinary skill in the art to provide Japanese Patent Publication No. 10-26724 with a drive system, as taught by Isogai et al., to more thoroughly scan the area in which the sensor is intended to detect an object.

With respect to claims 12 and 13, one of ordinary skill in the art is expected to routinely experiment with parameters so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been no more than an obvious matter of engineering design choice, as determined through routine experimentation and optimization, for one of ordinary skill to provide the pivot range with a time span of less than 5ms and with a time span of greater than 25ms and less than 50ms.

Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 10-26724, as applied to claims 1 and 10 above, and further in view of Isogai et al. Isogai et al. discloses a space monitoring device comprising a housing (not numbered, but shown in figure 1a) for holding the components of the space monitoring device. Isogai et al. also discloses the use of a phase delay process for distance measurement (see paragraph 60, lines 1-3), an alarm (see paragraph 49, line 9) and an evaluation unit 87 which determines if an object is present based on a reference value.

It would have been obvious to one of ordinary skill in the art to provide Japanese Patent Publication No. 10-26724 with a housing, a phase delay process, an alarm and

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an evaluation unit, as taught by Isogai et al., to protect the components of the space monitoring device, to increase the accuracy of the distance measured, to enable the user to easily recognize when an object has been detected, and to accurately determine if an object has been detected, respectively.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Roslak et al. is cited for disclosing a compact sensing device utilizing a DMD as shown in figure 7B.

Response to Arguments

Applicant's arguments filed August 16, 2006 have been fully considered but they are moot in view of the new grounds of rejection.

Conclusion

THIS ACTION IS NOT MADE FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Strimbu whose telephone number is 571-272-6836. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571-272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Gregory J. Strimbu", with a long horizontal flourish extending to the right.

Gregory J. Strimbu
Primary Examiner
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October 20, 2006